

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 90 - 035  
NPDES PERMIT NO. CA0037621

AMENDMENT OF WASTE DISCHARGE REQUIREMENTS, ORDER NO. 88-176

CITY OF SUNNYVALE  
SUNNYVALE WATER POLLUTION CONTROL PLANT  
SUNNYVALE  
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The Board adopted Order No. 88-176, reissuing waste discharge requirements for the City of Sunnyvale (hereinafter called the discharger) on December 21, 1988. The City discharges tertiary treated effluent from the Sunnyvale Water Pollution Control Plant into Sunnyvale West Channel, via Guadalupe Slough, into South San Francisco Bay.
2. The Basin Plan does not establish water quality objectives and effluent limitations for heavy metals in South San Francisco Bay. The discharger is obligated to perform specific heavy metals and toxicity monitoring studies, and assist in the gathering of data needed for development of site-specific water quality objectives and effluent limitations, to comply with the limitations of the Basin Plan.
3. Interim controls on heavy metals are needed because of the limited assimilative capacity of South San Francisco Bay, despite a more than 50% reduction in annual metals loadings since 1975.
4. Order No. 88-176 specifies interim concentration limits for toxic pollutants, and specifies that the Board will amend the permit before December 31, 1989, to establish performance based interim effluent limits for toxic pollutants as defined in Effluent Limitation B.4. The order also specifies that toxic pollutant mass loadings limits will be set for individual toxic pollutants. Limits shall be determined by using the upper 95% confidence limit, and will rely on additional self-monitoring data collected after adoption of Order No. 88-176. Short-term methods available to the discharger to control toxics levels in effluent include more stringent pre-treatment requirements (industrial user categories, local limits, surveillance, and enforcement) and pilot waste minimization programs.
5. The discharger has complied with all toxic pollutant monitoring and reporting requirements specified in Order No. 88-176. Toxics data submitted by the discharger were used to calculate interim concentration and mass loading limits, using a method that differed from the 95% upper confidence limit because of limitations in the data.

Limits were calculated using the 95th percentile value of 1989 measures, which fulfills the intent of Order 88-176. Flow data used in calculating the mass loading was a mean of flows from 1985, 1986, 1987, and 1988. This period was chosen because it encompassed a more normal rainfall regime than the current drought.

6. The discharger is currently conducting studies to assess the impacts of heavy metals on South San Francisco Bay. Order 88-176 requires the discharger to submit proposals for further studies on the impacts of heavy metals by February 1, 1990. Because data to best design these studies will not be available until after February 1, 1990, the deadline is extended to July 15, 1990. The discharger is also required to submit results of salt marsh conversion assessment and habitat utilization studies 180 days prior to permit reissuance. This deadline will not allow adequate time for analysis of field survey data collected in the studies. This deadline should be extended to 120 days prior to the next permit reissuance.
7. This action to amend an NPDES Permit is exempt from the provision of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
8. The discharger and interested agencies and persons have been notified of the Board's intent to reissue waste discharge requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
9. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the Clean Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Provision B.4.a. of Order 88-176 shall be amended as follows:

4. Interim Limits for Toxic Pollutants

- a. Prior to permit expiration, the effluent shall not exceed the following interim limits:

Constituent	Annual 95th Percentile( $\mu\text{g/L}$ )(2)
Arsenic	13
Cadmium	3.4
Chromium(VI)	10
Copper	34
Lead	12
Mercury	2

Nickel	28
Silver	4
Zinc	125
Cyanide	40
Phenolic Compounds	120
PAHs(1)	26
Selenium	2

Notes:

(1) Polynuclear aromatic hydrocarbons

(2) In calculating compliance, the discharger will count all non-detect measures at the detection level. The discharger will measure compliance with the 95th percentile limit once each calendar year. The 95th percentile value is the highest concentration measured during the year after removing the top 5% of the results for the year (i.e., use the greatest value for sample size  $n = 1$  to 19, second greatest value for  $n = 20$  to 39, and third greatest for  $n = 40$  to 59). After 5% of the yearly measures for any toxin have exceeded the interim limit, each additional exceedance will constitute a violation for the measurement period of that toxin (e.g., metals measurements are taken weekly, thus each exceedance after the 5% allowed will be counted as one week of violation). The Board may review compliance before the end of the calendar year if it observes a pattern of exceedances that suggest the annual limit will be exceeded.

B. Provision B.4.b is amended as follows:

b. The intent of the interim limits is to maintain ambient receiving water conditions in the South Bay until site specific objectives and effluent limits are developed. Performance-based interim limits should prevent significant increases in discharge of toxics over current levels. When reviewing any non-compliance with these interim concentration limits, the Board will consider each pollutant separately and will consider increasing trends in pollutant concentration more seriously than isolated occurrences. Because effluent toxics concentrations may be affected by heavy rainfall years, and wet year data were not considered in the development of these limits, exceedances during wet weather events will also be evaluated individually. Site specific limits to be developed by December 31, 1991, may be higher or lower than the interim limits.

C. Provision B.5, first paragraph, shall be amended as follows:

During the period in which interim limits are in effect, the discharger should investigate waste-minimization and source controls in preparation for potentially more stringent site-specific limits. The following final effluent limits for toxic pollutants will become effective on December 21, 1991, unless the Regional Board establishes alternative limits based on site-specific studies:

D. Provisions B.6.a and B.6.b shall be amended as follows:

6. Toxic Pollutant Mass Loadings

a. Prior to permit expiration, the effluent mass loadings shall not exceed the following interim limits:

Constituent	Annual Average(lbs/day)
Arsenic	413
Cadmium	121
Chromium(VI)	468
Copper	1293
Lead	440
Mercury	83
Nickel	1155
Silver	165
Zinc	5308
Cyanide	1678
Phenolic Compounds	4730
PAHs	1073
Selenium	83

Notes:

(1) In calculating compliance, the discharger will count all non-detect measures at the detection level. Mass loading should be calculated for each analytical result (e.g., for weekly measures, calculate loadings weekly using weekly-average flow data).

b. The intent of the interim mass loading limits is to maintain ambient receiving water conditions in the South Bay until site specific objectives and effluent limits are developed. Performance-based interim limits should prevent significant increases in discharge of toxics over current levels. When reviewing any non-compliance with these interim concentration limits, the Board will consider each pollutant separately and will consider increasing trends in pollutant concentration more seriously than isolated occurrences. Because effluent toxics concentrations may be affected by heavy rainfall years, and wet year data were not considered in the development of these limits, exceedances during wet weather events will also be evaluated individually. Site specific mass loading limits to be developed by December 31, 1991, may be higher or lower than the interim limits.

E. Provision E.3, page 9, line 5, shall be amended to change "180 days" to "120 days."

F. Provision E.5.d, page 10, line 39, shall be amended to change "February 1, 1990" to "July 15, 1990."


G. Provision E.6, page 11, line 33, shall be amended to change "March 1, 1990" to "July 1, 1990."

H. The Self-Monitoring Program, Part B, page 7, shall be modified to add the following requirement:

7. If any effluent sample is in violation of interim toxics limits, sampling shall be increased for that toxic to daily for at least seven days, and until compliance with the limits has been demonstrated for three successive samples. All additional monitoring

results shall be reported in the monthly monitoring reports. The discharger shall also increase pretreatment and source control efforts to determine the source of the increased toxins levels.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on February 21, 1990.



Steven R. Ritchie  
Executive Officer